RISK MANAGEMENT GUIDE

for

Cold Weather Operations

USARAK

Northern Warfare Training Center

United States Army Alaska Pamphlet 385-4 ***1 March 2004***

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY ALASKA
Fort Richardson, Alaska 99505-5000

United States Army Alaska Pamphlet 385-4 ***1 March 2004***

Safety
Risk Management for Cold Weather Operations

Summary. This guide is intended to give leaders at all levels a quick reference for implementing the risk management process into cold weather training plans and operations. The risk assessment matrices and worksheets included use the latest methodology put forth by the Army Safety Center, Fort Rucker, Alabama. The standard risk management and risk assessment process outlined in FM 3-100.12, Risk Management and United States Army Alaska (USARAK) 350-1 apply throughout this document; the Northern Warfare Training Center at Ft. Wainwright simply modified the tools to more accurately assess the hazards and additional risks imposed by the (often severe) cold weather environment. Section I of this handbook is designed to help leaders assess unit operations. A planning considerations guide (Temperature Zones) is found at Annex B. This guide outlines many mission essentials, as well as tips to consider when planning missions for various cold conditions. Section II contains risk assessment worksheets that the NWTC utilizes in its cold weather courses; small unit leaders can use these worksheets as a baseline when conducting arctic light individual training (ALIT). Section II identifies risks and suggests control measures associated with executing basic skills such as tent and stove drill, as well as more complex tasks such as snowshoe and ski marches. The leader must identify any additional environmental hazards, which may or may not be present at the time, and assess accordingly. Here again the guidelines at Annex B may lend valuable information for planning safe, effective training.

Applicability. This pamphlet applies to units and activities assigned or attached to USARAK.

Interim Changes. Interim changes to this pamphlet are not official unless they are authenticated by the director of information management. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. The proponent agency of this pamphlet is the USARAK Northern Warfare Training Center, Ft. Wainwright, Alaska, www.usarak.army.mil/nwtc. Users are invited to send comments and suggested improvements on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) directly to APVR-WNW.

---

*This pamphlet supersedes United States Army Alaska (USARAK) Pamphlet 385-4, dated 31 July 1996.

Contents

SECTION I

Risk Assessment
for Unit Operations

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

RISK MANAGEMENT WORKSHEET

1. Organization and Unit										***2. Page ____ of _____***	
3. Mission/Task				***4. Date/Time Group*** ***Begin:*** ***End:***						***5. Date Prepared:***	
6. Prepared by: (rank, name, duty position)											
7. Operational phase in which the mission/task will be conducted:											
8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		
14. Remaining Risk Level After Countermeasures are Implemented: (circle one) ***LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)***											
15. Risk Decision Authority Level: (approval authority signature block) ***If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).***											

SECTION II

Risk Assessment for Cold Weather Skills Training

This section gives some examples of the five step risk assessment process as it applies to tasks unique to training in extreme cold weather environments.

SECTION II: Tent & Stove Drill

1. Organization and Unit		2. Page ____ of _____
3. Mission/Task: Tent And Stove Drill	4. Date/Time Group Begin: End:	5. Date Prepared:
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	9. Assess the Hazards: Initial Risks:				10. Develop Control Measures for Identified Hazards: Specific measures taken to reduce the probability and severity of a hazard	11. Make Risk Decisions: Remaining risks:				12. How to Implement Controls: Include SOPs, references, written and verbal orders, etc.	13. Supervision and evaluation by: Continuous leader checks, buddy system, situation reports, etc.
	L	M	H	E		L	M	H	E		
FUEL SPILLS		M			POL handler gloves for fuel handling; refuel away from tent; fuel absorbent pad beneath fuel can.	L				Rehearse Tent and Stove Drill in ALIT training and throughout winter months until all soldiers proficient (battle drill).	OIC/NCOIC, Instructors, Medics
TENT FIRE			H		Operational fire extinguisher and fire guard required when stove in use; controlled burn rate; stove cool for refuel or relight; all soldiers awake during relighting; all soldiers operating stove or conducting fire guard must be licensed on the stove in operation; only army approved heaters (SHC, SHS, SHA, H-45) used in sleeping areas and stove used IAW appropriate TM.		M			Instructors bivouac in tent to ensure compliance during all courses.	
CARBON MONOXIDE			H		Ensure adequate ventilation; only army approved heaters (SHC, SHS, SHA, H-45) used in sleeping areas and stove used IAW appropriate TM.		M				

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Battalion Commander (Commandant)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: Thermal Shelter, Quingy or Snow Cave Bivouac

1. Organization and Unit		*2. Page ____ of _____*
3. Mission/Task: Thermal Shelter, Quingy or Snow Cave Bivouac	*4. Date/Time Group* *Begin:* *End:*	*5. Date Prepared:*
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	*9. Assess the Hazards:* *Initial Risks:*				*10. Develop Control Measures for Identified Hazards:* *Specific measures taken to reduce the probability and severity of a hazard*	*11. Make Risk Decisions:* *Remaining risks:*				*12. How to Implement Controls:* *Include SOPs, references, written and verbal orders, etc.*	*13. Supervision and evaluation by:* *Continuous leader checks, buddy system, situation reports, etc.*
	L	*M*	*H*	*E*		*L*	*M*	*H*	*E*		
CARBON MONOXIDE POISONING			**H**		**Ensure adequate ventilation; ski poles used to create holes in the roof of snow cave or quingy shelter; thermal shelter door is not completely sealed; candles/stoves extinguished prior to sleep cycle.**		**M**			**Instructors conduct checks throughout the night**	**OIC/NCOIC, Instructors, Medics**
COLD WEATHER INJURIES		**M**			**Ensure students keep boots inside the sleeping bags during the rest cycle.** **Heated shelter is available**	**L**				**Instructors check that students place boots inside sleeping bag prior to rest cycle. Instructors bivouac in thermal shelter, quingy or snow cave to ensure that they are aware of the conditions students are experiencing and so that they can make adjustments as required.** **Chalet is heated shelter/control point**	

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) *MEDIUM (M)* *HIGH (H)* *EXTREMELY HIGH (E)*

15. Risk Decision Authority Level: (approval authority signature block) Battalion Commander (Commandant)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: Sled (Ahkio) Packing

1. Organization and Unit		2. Page ____ of _____
3. Mission/Task: Sled (Ahkio) Packing	4. Date/Time Group Begin: End:	5. Date Prepared:
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	9. Assess the Hazards: Initial Risks:				10. Develop Control Measures for Identified Hazards: Specific measures taken to reduce the probability and severity of a hazard	11. Make Risk Decisions: Remaining risks:				12. How to Implement Controls: Include SOPs, references, written and verbal orders, etc.	13. Supervision and evaluation by: Continuous leader checks, buddy system, situation reports, etc.
	L	M	H	E		L	M	H	E		
FUEL SPILLS		M			Check for fuel can leaks; replace faulty gasket/can; fuel can double-bagged to minimize contamination of other items.	L				SOPs for double bagging fuel cans and transporting Ahkio groups on vehicles.	Instructors

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Company Commander (Training Officer)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: 5K Snowshoe March

1. Organization and Unit		*2. Page ____ of _____*
3. Mission/Task: 5K Snowshoe March on the BRTS trails	*4. Date/Time Group* *Begin:* *End:*	*5. Date Prepared:*
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	*9. Assess the Hazards:* *Initial Risks:*				*10. Develop Control Measures for Identified Hazards:* *Specific measures taken to reduce the probability and severity of a hazard*	*11. Make Risk Decisions:* *Remaining risks:*				*12. How to Implement Controls:* *Include SOPs, references, written and verbal orders, etc.*	*13. Supervision and evaluation by:* *Continuous leader checks, buddy system, situation reports, etc.*
	L	*M*	*H*	*E*		*L*	*M*	*H*	*E*		
SLIPPING, FALLING	**L**				**Ski poles for maintaining balance; fall and recovery exercises.**	**L**				**Reference Appendix F: NWTC BRTS 5 K course and Appendix B: Temperature Zones**	**OIC/NCOIC, Instructors, Medics**
DEHYDRATION		**M**			**2 qts water/soldier w/ 5 gal cans available; enforce clothing adjustments / workload.**	**L**				**Control measures and implementation guidance for all snowshoe marches as per USARAK 350-1:**	
COLD WEATHER INJURIES			**H**		**GORTEX Parka hood in the up position when -10 degrees F or colder; all exposed flesh covered when -25 degrees F or colder.** **Enforce clothing adjustments; enforce continuous movement.** **For NWTC BRTS course 4 warm up shelters with warm water on course; one is a SUSV to be used for evacuation purposes.** **Eight checkpoints on course manned by 5 NWTC instructors and 3 medics.** **Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.**		**M**			**The unit commander will designate the course used. Courses will be laid-out close enough to maintained roads to facilitate rapid evacuation of soldiers who become unable to complete the course due to equipment failure or injury.** **Company-sized units can use up to three ability groups. The route(s) selected for the entire unit or each ability group and should take into account the proficiency of the soldiers. The greater the unit's proficiency, the more challenging the course may be.** **There is no time limit to finish cross-country snowshoe events.** **If the planned route is along unprotected routes or will cross roads, road guards will be employed. No course will use or cross a road that is designated as a no running route during the time period when the event will take place.**	

										Units will designate a straggler-control NCO equipped with a reflective vest (at all times) and flashlight (required during darkness. **Straggler control NCO will: Be Cold Weather Leader Course (CWLC) trained. Have radio communication available.** **The course will include at least one checkpoint per mile of course. Unit commanders may increase the number of checkpoints depending on weather conditions and unit/ability group snowshoe proficiency. At checkpoints leaders will conduct safety checks and allow personnel to make adjustments to their equipment as needed. Leaders conducting the safety checks must be CWLC trained. Radio communications will be available at each checkpoint, either carried by the unit or pre-positioned at the checkpoint.** **One or more heated, radio equipped evacuation vehicle(s) will be positioned along the course. An appropriately equipped Medic in addition to the driver will man the vehicle. The evacuation vehicle must be capable of being brought close to any point along the course to facilitate treatment or evacuation of injured soldier(s).** **Uniform for cross-country snowshoe movements will be winter field (See Appendix B). Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.** **Unit commanders will carefully plan a cross-country snowshoe event. The use of snowshoes in difficult terrain under limited visibility and cold weather conditions add to the stress of aerobic/cardiovascular conditioning exercise; increases the risk of injury.**	

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Battalion Commander (Commandant)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: 10K Ski March

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task: 10K Ski March at BRTS trails	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		
SLIPPING, FALLING	**L**				**Ski poles for maintaining balance; proper waxing techniques; fall and recovery exercises; minimum of 40 hours ski training.**	**L**				**Reference Appendix F: NWTC BRTS 10 K course and Appendix B: Temperature Zones** **Control measure and implementation guidance for all ski marches as per USARAK 350-1:** **The unit commander will designate the course used. Courses will be laid-out close enough to maintained roads to facilitate rapid evacuation of soldiers who become unable to complete the course due to equipment failure or injury.** **Company-sized units can use up to three ability groups. The route(s) selected for the entire unit or each ability group and should take into account the proficiency of the soldiers. The greater the unit's proficiency, the more challenging the course may be.** **There is no time limit to finish cross-country skiing events.** **If the planned route is along unprotected routes or will cross roads, road guards will be employed. No course will use or cross a road that is designated as a no running route during the time period when the event will take place.**	**OIC/NCOIC, Instructors, Medics**
DEHYDRATION		**M**			**2 qts water/soldier w/ 5 gal cans avail; enforce clothing adjustments/ workload.**	**L**					
COLD WEATHER INJURIES			**H**		**GORTEX Parka hood in the up position when -10 degrees F or colder; all exposed flesh covered when -25 degrees F or colder.** **Enforce clothing adjustments; enforce continuous movement.** **For NWTC BRTS course 4 warm up shelters with warm water on course; one is a SUSV to be used for evacuation purposes.** **Eight checkpoints on course manned by 5 NWTC instructors and 3 medics.**		**M**				

					Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.					**Units will designate a straggler-control NCO equipped with a reflective vest (at all times) and flashlight (required during darkness. Straggler control NCO will: Be Cold Weather Leader Course (CWLC) trained. Have radio communication available.** **The course will include at least one checkpoint per mile of course. Unit commanders may increase the number of checkpoints depending on weather conditions and unit/ability group snowshoe proficiency. At checkpoints leaders will conduct safety checks and allow personnel to make adjustments to their equipment as needed. Leaders conducting the safety checks must be CWLC trained. Radio communications will be available at each checkpoint, either carried by the unit or pre-positioned at the checkpoint.** **One or more heated, radio equipped evacuation vehicle(s) will be positioned along the course. An appropriately equipped Medic in addition to the driver will man the vehicle. The evacuation vehicle must be capable of being brought close to any point along the course to facilitate treatment or evacuation of injured soldier(s).** **Uniform for cross-country ski march will be winter field (See Appendix B). Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.** **Unit commanders will carefully plan a cross-country ski events. The use of skis in difficult terrain under limited visibility and cold weather conditions add to the stress of aerobic/cardiovascular conditioning exercise; increases the risk of injury.**	

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)

LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Battalion Commander (Commandant)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: Sled (Ahkio) Hauling

1. Organization and Unit		*2. Page ____ of _____*
3. Mission/Task: Sled (Ahkio) Hauling	*4. Date/Time Group* *Begin:* *End:*	*5. Date Prepared:*
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	*9. Assess the Hazards:* *Initial Risks:*				*10. Develop Control Measures for Identified Hazards:* *Specific measures taken to reduce the probability and severity of a hazard*	*11. Make Risk Decisions:* *Remaining risks:*				*12. How to Implement Controls:* *Include SOPs, references, written and verbal orders, etc.*	*13. Supervision and evaluation by:* *Continuous leader checks, buddy system, situation reports, etc.*
	L	*M*	*H*	*E*		*L*	*M*	*H*	*E*		
SLIPPING, FALLING	**L**				**Ski poles for maintaining balance; fall and recovery exercises; minimum of 40 hours ski training.**	**L**				**Reference Appendix F: NWTC BRTS 10 K course and Appendix B: Temperature Zones** **Control measure and implementation guidance for all ski marches as per USARAK 350-1:** **The unit commander will designate the course used. Courses will be laid-out close enough to maintained roads to facilitate rapid evacuation of soldiers who become unable to complete the course due to equipment failure or injury.** **Company-sized units can use up to three ability groups. The route(s) selected for the entire unit or each ability group and should take into account the proficiency of the soldiers. The greater the unit's proficiency, the more challenging the course may be.** **There is no time limit to finish cross-country skiing events.** **If the planned route is along unprotected routes or will cross roads, road guards will be employed. No course will use or cross a road that is designated as a no running route during the time period when the event will take place.**	**OIC/NCOIC, Instructors, Medics**
DEHYDRATION	**L**				**2 qts water/soldier w/ 5 gal cans avail; enforce clothing adjustments/ workload.**	**L**					
FUEL SPILLS		**M**			**Check for fuel can leaks; replace faulty gasket/can; fuel can double-bagged to minimize contamination of other items.**	**L**					
COLD WEATHER INJURIES			**H**		**Mission essential equipment in Ahkio only; increase number of ahkios per squad to three and divide gear among sleds to reduce sled weight (less than 100 pounds per sled for long movements).** **GORTEX Parka hood in the up position when -10 degrees F or colder; all exposed flesh covered when -25 degrees F or colder.** **Enforce clothing adjustments; enforce continuous movement.**		**M**				

					For NWTC BRTS course 4 warm up shelters with warm water on course; one is a SUSV to be used for evacuation purposes. **Eight checkpoints on course manned by 5 NWTC instructors and 3 medics.** **Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.**					**Units will designate a straggler-control NCO equipped with a reflective vest (at all times) and flashlight (required during darkness. Straggler control NCO will: Be Cold Weather Leader Course (CWLC) trained. Have radio communication available.** **The course will include at least one checkpoint per mile of course. Unit commanders may increase the number of checkpoints depending on weather conditions and unit/ability group snowshoe proficiency. At checkpoints leaders will conduct safety checks and allow personnel to make adjustments to their equipment as needed. Leaders conducting the safety checks must be CWLC trained. Radio communications will be available at each checkpoint, either carried by the unit or pre-positioned at the checkpoint.** **One or more heated, radio equipped evacuation vehicle(s) will be positioned along the course. An appropriately equipped Medic in addition to the driver will man the vehicle. The evacuation vehicle must be capable of being brought close to any point along the course to facilitate treatment or evacuation of injured soldier(s).** **Uniform for cross-country ski march will be winter field (See Appendix B). Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.** **Unit commanders will carefully plan a cross-country ski events. The use of skis in difficult terrain under limited visibility and cold weather conditions add to the stress of aerobic/cardiovascular conditioning exercise; increases the risk of injury.**	

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)

LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Company Commander (Training Officer)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: 10K Biathalon

1. Organization and Unit		2. Page ____ of _____
3. Mission/Task: 10K Biathalon	4. Date/Time Group Begin: End:	5. Date Prepared:
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	9. Assess the Hazards: Initial Risks:				10. Develop Control Measures for Identified Hazards: Specific measures taken to reduce the probability and severity of a hazard	11. Make Risk Decisions: Remaining risks:				12. How to Implement Controls: Include SOPs, references, written and verbal orders, etc.	13. Supervision and evaluation by: Continuous leader checks, buddy system, situation reports, etc.
	L	M	H	E		L	M	H	E		
SLIPPING, FALLING	L				Ski poles for maintaining balance; proper waxing techniques; fall and recovery exercises.	L				Reference Appendix F: NWTC BRTS 10 K course and Appendix B: Temperature Zones Control measure and implementation guidance for all ski marches as per USARAK 350-1: The unit commander will designate the course used. Courses will be laid-out close enough to maintained roads to facilitate rapid evacuation of soldiers who become unable to complete the course due to equipment failure or injury. Company-sized units can use up to three ability groups. The route(s) selected for the entire unit or each ability group and should take into account the proficiency of the soldiers. The greater the unit's proficiency, the more challenging the course may be. There is no time limit to finish cross-country skiing events. If the planned route is along unprotected routes or will cross roads, road guards will be employed. No course will use or cross a road that is designated as a no running route during the time period when the event will take place.	OIC/NCOIC, Instructors, Medics Commandant and/or 1SG on site
DEHYDRATION		M			2 qts water/soldier w/ 5 gal cans avail; enforce clothing adjustments/ workload.						
COLD WEATHER INJURIES			H		GORTEX Parka hood in the up position when -10 degrees F or colder; all exposed flesh covered when -25 degrees F or colder. Enforce clothing adjustments; enforce continuous movement. For NWTC BRTS course 4 warm up shelters with warm water on course; one is a SUSV to be used for evacuation purposes. Eight checkpoints on course manned by 5 NWTC instructors and 3 medics. Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.		M				

										Units will designate a straggler-control NCO equipped with a reflective vest (at all times) and flashlight (required during darkness. Straggler control NCO will: Be Cold Weather Leader Course (CWLC) trained. Have radio communication available. **The course will include at least one checkpoint per mile of course. Unit commanders may increase the number of checkpoints depending on weather conditions and unit/ability group snowshoe proficiency. At checkpoints leaders will conduct safety checks and allow personnel to make adjustments to their equipment as needed. Leaders conducting the safety checks must be CWLC trained. Radio communications will be available at each checkpoint, either carried by the unit or pre-positioned at the checkpoint.** **One or more heated, radio equipped evacuation vehicle(s) will be positioned along the course. An appropriately equipped Medic in addition to the driver will man the vehicle. The evacuation vehicle must be capable of being brought close to any point along the course to facilitate treatment or evacuation of injured soldier(s).** **Uniform for cross-country ski march will be winter field (See Appendix B). Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.** **Unit commanders will carefully plan a cross-country ski events. The use of skis in difficult terrain under limited visibility and cold weather conditions add to the stress of aerobic/cardiovascular conditioning exercise; increases the risk of injury.**	
LIVE FIRE				**E**	**Strict Adherence to Range Safety SOP; Brief all participants & range safety personnel prior to event.**				**H**	**Reference NWTC Range SOP.**	

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Brigade Commander (Deputy Commanding Officer USARAK)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: Skijoring

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task: Skijoring	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		
SLIPPING, FALLING, COLLISIONS	**L**				**All personnel have a minimum of 40 hours of ski training; 120 to 150 foot rope used; proper personnel spacing 10-12 feet apart; soldiers are never allowed to attach themselves directly to the rope; observer with working headset has communication with driver (also with working headset) to control speed and/or stop vehicle; max speed is 15 MPH (24KPH); observer slows vehicle during turns and or to allow skiers to maneuver through obstacles; personnel that fall should roll to the outside to prevent the person behind them from running them over.**	**L**				**Experienced personnel conduct skijoring demonstration**	**OIC/NCOIC, Instructors, Medics**

SECTION II: Skijoring (cont.)

COLD WEATHER INJURIES			**H**		**All exposed flesh covered; GORTEX Parka hood in the up position ; goggles worn.** **For NWTC BRTS course 4 warm up shelters with warm water on course; one is a SUSV to be used for evacuation purposes.** **Eight checkpoints on course manned by 5 NWTC instructors and 3 medics.** **Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.**		**M**				

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)

LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Battalion Commander (Commandant)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

SECTION II: Avalanche Training

1. Organization and Unit		2. Page ____ of _____
3. Mission/Task: Avalanche Training	4. Date/Time Group Begin: End:	5. Date Prepared:
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	9. Assess the Hazards: Initial Risks:				10. Develop Control Measures for Identified Hazards: Specific measures taken to reduce the probability and severity of a hazard	11. Make Risk Decisions: Remaining risks:				12. How to Implement Controls: Include SOPs, references, written and verbal orders, etc.	13. Supervision and evaluation by: Continuous leader checks, buddy system, situation reports, etc.
	L	M	H	E		L	M	H	E		
DEHYDRATION					**2 qts water/soldier w/ 5 gal cans avail; enforce clothing adjustments/ workload.**	**L**					**OIC/NCOIC, Instructors, Medics**
COLD WEATHER INJURIES		**M**			**GORTEX Parka hood in the up position when -10 degrees F or colder; all exposed flesh covered when -25 degrees F or colder.** **Enforce clothing adjustments; enforce continuous movement.** **Each soldier will carry a survival ruck. The survival ruck will include, at the minimum, the soldier's sleeping bag, sleeping mat, spare socks and mitten inserts.** **Evacuation vehicles (one heated SUSV minimum) positioned at or near training site; medics present for training and conducting checks.**		**M**			**Medics and instructors conduct checks of students during training**	

SECTION II: Avalanche Training (cont.)

SNOW AVALANCHES			**H**		**Strict adherence to winter backcountry travel techniques; route selection and hazard evaluation conducted by senior instructors/TAC prior to execution of avalanche scenario training; alternate location selected if avalanche danger is high.** **Soldiers outfitted with shovels, beacons, probes, and inclinometers and provided with instruction on the use of these items prior to backcountry travel/avalanche training scenarios.**		**M**			**Avalanche platform instruction and specialized equipment training (beacons and probes) is conducted prior to backcountry travel or avalanche scenario.** **For avalanche scenario, site selection is conducted by NCOIC.**	

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block) Battalion Commander (Commandant)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

FOR THE COMMANDER:

PAUL J. REOYO
COL, GS
Chief of Staff

OFFICIAL:

GERALD H. MILLER
LTC, SC
Director of Information Management

ANNEX A: UNIVERSAL RISK ASSESSMENT MATRIX

RISK ASSESSMENT MATRIX

EFFECT			HAZARD PROBABILITY				
			FREQUENT	LIKELY	OCCASIONAL	SELDOM	UNLIKELY
			A	B	C	D	E
EFFECT	CATASTROPHIC	I	EXTREMELY HIGH				MODERATE
	CRITICAL	II	HIGH		HIGH	MODERATE	
	MARGINAL	III	HIGH	MODERATE			
	NEGLIGIBLE	IV	MODERATE	LOW			

EFFECT

1. CATASTROPHIC - DEATH OR PERMANENT TOTAL DISABILITY, SYSTEM LOSS, MAJOR PROPERTY DAMAGE.
2. CRITICAL - PERMANENT PARTIAL DISABILITY, TEMPORARY TOTAL DISABILITY IN EXCESS OF 3 MONTHS, MAJOR SYSTEM DAMAGE, MAJOR PROPERTY DAMAGE.
3. MARGINAL - MINOR INJURY, LOST WORKDAYS, COMPENSABLE INJURY/ILLNESS, MINOR SYSTEM DAMAGE, MINOR PROPERTY DAMAGE.
4. NEGLIGIBLE - FIRST AID OR MINOR SUPPORTIVE MEDICAL TREATMENT, MINOR SYSTEM IMPAIRMENT.

PROBABILITY

A. FREQUENT - OCCURS OFTEN - ALL SOLDIERS AND/OR EQUIPMENT ARE CONTINUOUSLY EXPOSED.
B. LIKELY - OCCURS FREQUENTLY - ALL SOLDIERS AND/OR EQUIPMENT ARE EXPOSED SEVERAL TIMES.
C. OCCASIONAL - OCCURS SOMETIMES - ALL SOLDIERS AND/OR EQUIPMENT IS EXPOSED SPORADICALLY
D. SELDOM - REMOTE OCCURRENCE - ALL SOLDIERS AND/OR EQUIPMENT ARE POSSIBLY EXPOSED.
E. UNLIKELY - RARE OCCURRENCE OF EXPOSURE

NOTE: UNIT EXPERIENCE AND EXPOSURE AFFECT THE PROBABILITY OF OCCURRENCE

RISK LEVELS

EXTREMELY HIGH - LOSS OF ABILITY TO ACCOMPLISH THE MISSION.

HIGH - SIGNIFICANTLY DEGRADES MISSION CAPABILITY.

MODERATE - DEGRADES MISSION CAPABILITY.

LOW - LITTLE OR NO IMPACT TO MISSION CAPABILITY.

ANNEX B: PLANNING CONSIDERATIONS FOR COLD WEATHER OPERATIONS

TEMPERATURE ZONE I
55º to 33º (F)

AREA OF CONSIDERATION	SPECIAL REQUIREMENTS & RECOMMENDED ACTIONS
CLOTHING & PERSONAL EQUIPMENT	lightweight polypropylene inner layer pile jacket and/or fleece bib overalls available and worn as necessary standard issue BDUs, w/ wet-weather parka & pants or ECWCS outer layer light & heavy socks (2 sock system) standard issue combat boot or intermediate cold weather boot (ICW) GORTEX black leather gloves w/ wool inserts or equivalent; contact gloves recommended Patrol bag w/ GORTEX cover balaclava and neck gaiter carried; worn as necessary
TRAINING	characteristics of cold weather environments nonfreezing cold weather injuries (hypothermia, trenchfoot, chilblains) clothing system, squad stoves, shelters (issued and improvised)
FOOD & WATER	standard rations (3600 ca.) per day – minimum 3.5 to 5 quarts water per day
SHELTER & HEAT	lightweight, back-packable tents/tarps (eg. poncho shelter, LEWS), to protect from winds and precipitation 1 squad type, single burner stove per shelter
ADDITIONAL SUPPORT REQUIREMENTS	foot powder, fuel for squad stoves water purification and sanitation plan
TASK / MISSION LIMITATIONS	None

ANNEX B: PLANNING CONSIDERATIONS FOR COLD WEATHER OPERATIONS

TEMPERATURE ZONE II
32º to 10º (F)

AREA OF CONSIDERATION	SPECIAL REQUIREMENTS & RECOMMENDED ACTIONS
CLOTHING & PERSONAL EQUIPMENT	lightweight, midweight or heavyweight polypropylene inner layer pile jacket and/or fleece bib overalls available and worn as necessary standard cold-wet uniform, wet-weather parka & pants or ECWCS outer layer light & heavy socks (2 sock system) intermediate cold weather boot (ICW) or black (VB) boot (where issued); leg gaiters (where issued) insulated gloves (eg. GORTEX gloves, Rucker glove, Carson glove, Kodiak Glove, Pro modular glove), trigger-finger mittens or Mutant Modular mittens contact gloves mandatory balaclava worn up; neck gaiter worn as necessary intermediate cold weather bag and GORTEX cover; sleeping pad required over-white camouflage
TRAINING	characteristics of cold weather environments nonfreezing cold weather injuries (hypothermia, trenchfoot, chilblains) freezing cold weather injuries (frostbite) clothing system, squad stoves, shelters (issued and improvised) effects of cold on weapons, commo, vehicles use of arctic 10 man tent and SHA stove - tent & stove operational within 30 min tent & stove safety, fire prevention & emergency evacuation
FOOD & WATER	standard rations (3600 ca.) per day w/ supplements if possible or cold weather ration (CWR), 4500 ca., hot ration AM and PM 3.5 to 5 quarts water per day
SHELTER & HEAT	arctic 10 man tent to provide warmth and drying facility SHA stove to heat arctic 10 man tent 2 squad type, single burner stoves per tent group lightweight, back-packable tents/tarps still in use to meet special requirements
ADDITIONAL SUPPORT REQUIREMENTS	medics and leaders begin mandatory inspections for frostbite - 2 to 3 times daily foot powder, fuel for squad stoves water purification and sanitation plan pioneer tools
TASK / MISSION LIMITATIONS	frozen ground begins to impede digging - pioneer tools needed as E-tool becomes ineffective; false sense of security from

ANNEX B: PLANNING CONSIDERATIONS FOR COLD WEATHER OPERATIONS

TEMPERATURE ZONE III
9º to -19º (F)

AREA OF CONSIDERATION	SPECIAL REQUIREMENTS & RECOMMENDED ACTIONS
CLOTHING & PERSONAL EQUIPMENT	lightweight, midweight or heavyweight polypropylene inner layer pile jacket and/or fleece bib overalls available and worn as necessary ECWCS outer layer light & heavy socks (2 sock system) white (VB) boot; leg gaiters (where issued) insulated gloves (eg. GORTEX gloves, Rucker glove, Carson glove, Kodiak Glove, Pro modular glove), trigger-finger mittens, Mutant Modular mittens or Arctic Mittens contact gloves mandatory balaclava worn up or down as dictated by temperature; neck gaiter worn as necessary; goggles recommended all components of the Modular Sleep System; sleeping pad required arctic canteen or Nalgene bottles with insulated covers over-white camouflage
TRAINING	characteristics of cold weather environments nonfreezing cold weather injuries (hypothermia, trenchfoot, chilblains) freezing cold weather injuries (frostbite) clothing system, squad stoves, shelters (issued and improvised) effects of cold on weapons, commo, vehicles use of arctic 10 man tent and SHA stove - tent & stove operational within 30 min. tent & stove safety, fire prevention & emergency evacuation thermal and snow shelter construction
FOOD & WATER	standard rations (3600 ca.) per day w/ mandatory supplements or cold weather ration (CWR), 4500 ca., hot ration AM and PM 3.5 to 5 quarts water per day
SHELTER & HEAT	arctic 10 man tent to provide warmth and drying facility SHA stove to heat arctic tent 2 squad type, single burner stoves per tent group
ADDITIONAL SUPPORT REQUIREMENTS	medics and leaders conduct mandatory frostbite inspections 4 to 6 times daily foot powder, fuel for squad stoves water purification and sanitation plan pioneer tools, fuel for SHA stoves engineer support for digging positions vehicle lube requirements change, OEA required; weapon systems require LAW
TASK / MISSION LIMITATIONS	frozen ground more prevalent - digging w/ pioneer tools very difficult engineer support often required to dig positions into the ground above ground defensive positions become the norm soldiers in static positions more vulnerable to frostbite

ANNEX B: PLANNING CONSIDERATIONS FOR COLD WEATHER OPERATIONS

TEMPERATURE ZONE IV
-20º to -40º (F)

AREA OF CONSIDERATION	SPECIAL REQUIREMENTS & RECOMMENDED ACTIONS
CLOTHING & PERSONAL EQUIPMENT	lightweight, midweight or heavyweight polypropylene inner layer pile jacket and/or fleece bib overalls available and worn as necessary ECWCS outer layer light & heavy socks (2 sock system) white (VB) boot; leg gaiters (where issued) insulated gloves (eg. GORTEX gloves, Rucker glove, Carson glove, Kodiak Glove, Pro modular glove), trigger-finger mittens, Mutant Modular mittens or Arctic Mittens contact gloves mandatory balaclava worn down; neck gaiter worn as necessary; goggles recommended hood of ECWCS Parka worn up all components of the Modular Sleep System; sleeping pad required arctic canteen or Nalgene bottles with insulated covers over-white camouflage
TRAINING	characteristics of cold weather environments nonfreezing cold weather injuries (hypothermia, trenchfoot, chilblains) freezing cold weather injuries (frostbite) clothing system, squad stoves, shelters (issued and improvised) effects of cold on weapons, commo, vehicles use of arctic 10 man tent and SHA stove - tent & stove operational within 30 min. tent & stove safety, fire prevention & emergency evacuation thermal and snow shelter construction
FOOD & WATER	standard rations (3600 ca.) per day w/ mandatory supplements or cold weather ration (RCW), 4500 ca., 3 hot rations per day whenever possible 3.5 to 5 quarts water per day
SHELTER & HEAT	arctic 10 man tent w/ liner to provide warmth and drying facility SHA stove to heat arctic tent 2 squad type, single burner stoves per tent group
ADDITIONAL SUPPORT REQUIREMENTS	medics and leaders conduct mandatory frostbite inspections *hourly* foot powder, fuel for squad stoves water purification and sanitation plan pioneer tools, fuel for SHA stoves engineer support for digging positions vehicle lube requirements change, OEA required; weapon systems require LAW increase spare parts for all systems; equip vehicles w/ ECW modifications warming tents & warm vehicles needed close to troops
TASK / MISSION LIMITATIONS	soldiers in static positions not recommended; moderate movement required to stay warm; all tasks take much longer and equipment breakage increases

ANNEX B: PLANNING CONSIDERATIONS FOR COLD WEATHER OPERATIONS

TEMPERATURE ZONE V
Below -40º (F)

AREA OF CONSIDERATION	SPECIAL REQUIREMENTS & RECOMMENDED ACTIONS
CLOTHING & PERSONAL EQUIPMENT	lightweight, midweight or heavyweight polypropylene inner layer pile jacket and/or fleece bib overalls available and worn as necessary ECWCS outer layer light & heavy socks (2 sock system) white (VB) boot; leg gaiters (where issued) Trigger-finger mittens, Mutant Modular mittens or Arctic Mittens contact gloves mandatory balaclava worn down; neck gaiter worn as necessary; goggles recommended hood of ECWCS Parka worn up all components of the Modular Sleep System arctic canteen or Nalgene bottles with insulated covers over-white camouflage
TRAINING	characteristics of cold weather environments nonfreezing cold weather injuries (hypothermia, trenchfoot, chilblains) freezing cold weather injuries (frostbite) clothing system, squad stoves, shelters (issued and improvised) effects of cold on weapons, commo, vehicles use of arctic 10 man tent and SHA stove - tent & stove operational within 30 min tent & stove safety, fire prevention & emergency evacuation thermal and snow shelter construction
FOOD & WATER	standard rations (3600 ca.) per day w/ mandatory supplements or cold weather ration (CWR), 4500 ca., 3 hot rations per day whenever possible 3.5 to 5 quarts water per day
SHELTER & HEAT	arctic 10 man tent w/ liner to provide warmth and drying facility SHA stove to heat arctic tent 2 squad type, single burner stoves per tent group
ADDITIONAL SUPPORT REQUIREMENTS	medics and leaders conduct mandatory frostbite inspections *every 30 min.* foot powder, fuel for squad stoves water purification and sanitation plan pioneer tools, fuel for SHA stoves engineer support for digging positions vehicle lube requirements change, OEA required; weapon systems require LAW increase spare parts for all systems; equip vehicles w/ ECW modifications warming tents & warm vehicles needed close to troops
TASK / MISSION LIMITATIONS	Training should be limited to essential tasks only; operations become extremely hazardous for even the most highly trained personnel - all operations require the highest level of scrutiny and authorization; most outside operations come to a halt unless absolutely critical

ANNEX C: Emergency Medical Evacuation Checklist

I. PRECOURSE PREPARATIONS:

- Instructors CLS or WFR; minimum 2 medics present ☐
- Group rescue equipment (sled, litter, etc.) pre-placed in training area ☐
- Communication links verified with Operations and Evac crew ☐
- MEDEVAC helicopter landing zones (LZ's) verified w/ Evac crew ☐

II. MEDEVAC REQUEST:

1. Location of Pickup Site _____

2. Radio Frequency & Call Sign _____ / _____

3. # Patients by Precedence _____
(Type & Severity of Wound, _____
Injury, or Illness) _____

4. Special Equipment Required _____

5. Number of patients _____
L- Litter A- Ambulatory _____

6. Security at pick-up site _____
N – No enemy troops in area _____
P- Possible enemy troops in area (caution) _____
E- Enemy troops in area (caution) _____
X-Enemy troops in area (escort required) _____

7. Method of Marking pick-up site: _____

8. Patient nationality and status _____

9. NBC Contamination: _____
N-Nuclear B-Biological
C-Chemical

ANNEX D: Wind Chill Chart

Wind Speed (mph) ↓	Air Temperature (°F)																	
	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95

Wind speed based on measures at 33 feet height. If wind speed measured at ground level multiply by 1.5 to obtain wind speed at 33 feet and then utilize chart.

WCT (°F) = 35.74 + 0.6215T - 35.75($V^{0.16}$) + 0.4275T($V^{0.16}$)

Where T is temperature (°F) and V is wind speed (mph)

RISK OF FROSTBITE (see times on chart below)

GREEN – LITTLE DANGER (frostbite occurs in >2 hours in dry, exposed skin)
YELLOW – INCREASED DANGER (frostbite could occur in 45 minutes or less in dry, exposed skin)
RED – GREAT DANGER (frostbite could occur in 5 minutes or less in dry, exposed skin)

Time to occurrence of frostbite in minutes or hours in the most susceptible 5% of personnel.

Wind Speed (mph) ↓	Air Temperature (°F)											
	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	>2h	>2h	>2h	>2h	31	22	17	14	12	11	9	8
10	>2h	>2h	>2h	28	19	15	12	10	9	7	7	6
15	>2h	>2h	33	20	15	12	9	8	7	6	5	4
20	>2h	>2h	23	16	12	9	8	8	6	5	4	4
25	>2h	42	19	13	10	8	7	6	5	4	4	3
30	>2h	28	16	12	9	7	6	5	4	4	3	3
35	>2h	23	14	10	8	6	5	4	4	3	3	2
40	>2h	20	13	9	7	6	5	4	3	3	2	2
45	>2h	18	12	8	7	5	4	4	3	3	2	2
50	>2h	16	11	8	6	5	4	3	3	2	2	2

WET SKIN COULD SIGNIFICANTLY DECREASE THE TIME FOR FROSTBITE TO OCCUR.

ANNEX E: Approval Authority Guidance
(IAW USARAK Regulation 350-1)

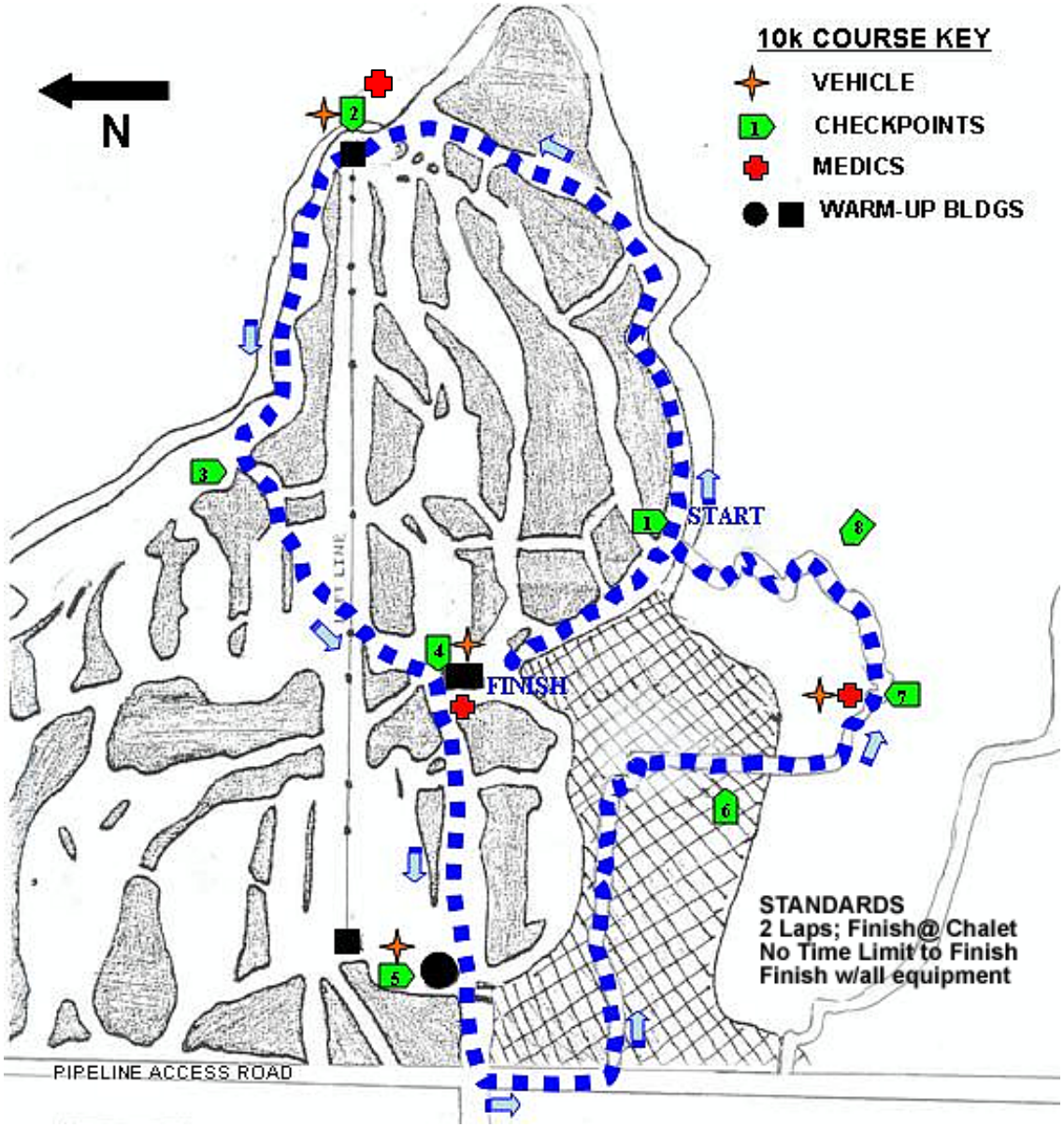
Quick Reference Guide

Risk Level	Low	Medium	High*	Extreme**
Numeric Value	**1,2**	**3,4**	**5,6**	**7,8,9**
Cumulative Score	**7 – 12**	**13 –23**	**24-36**	**36-40**
General Clearance Level Guidelines	**Company Commander**	**Battalion Commander**	**Brigade; major subordinate command commander**	**Major subordinate command; major command commander**

*High risk operations require coordination with the next higher level of command external to the organization making the assessment.

**Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.

ANNEX F: Black Rapids Training Site 5K Snowshoe/10K Ski March Diagram



The layout depicts 5 kilometers. For the snowshoe march 1 lap is completed. For the ski march 2 laps are completed.

ANNEX G

Risk Assessment
for Unit Operations
(Blank Copies)

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G

RISK ASSESSMENT MATRIX FOR COLD WEATHER OPERATIONS

Planning

CIRCLE ONE	Risk Value		SCORE:
Guidance	Preparatory Time		
	Optimum	Adequate	Minimal
FRAGO	3	4	5
OPORD	2	3	4
OPLAN/LOI	1	2	3

Mission Control

CIRCLE ONE	Risk Value		SCORE:
Task Organization	Training Event		
	Support Nontactical/Garrison	Day Tactical	Night Tactical
OPCON	3	4	5
Attached	2	3	4
Organic	1	2	3

Soldier Endurance

CIRCLE ONE	Risk Value		SCORE:
Environmental Preparation	Soldier Preparation		
	Optimum	Adequate	Minimal
Nonacclimated	3	4	5
Part. Acclimated	2	3	4
Acclimated	1	2	3

Soldier Selection

CIRCLE ONE	Risk Value			SCORE:
Task	Soldier Experience			
	Extensive CW Exposure	CWI 2 / Some CW Exposure	CWI 1 / No CW Exposure	MOS Qualified No CW Training
Complex	3	4	5	6
Routine	2	3	4	5
Simple	1	2	3	4

Weather

CIRCLE ONE	Risk Value			SCORE:
Temperature (F) (Spec. Conditions)	Exposure Duration			
	<8 hrs.	8 - 24 hrs.	24 - 72 hrs.	Over 72 hrs.
55 to 33	1	1	2	3
32 to 10	2	2	3	4
9 to -19	3	4	4	5
-20 to -40	5	6	7	8
Below -40	6	7	8	9
(blizzard, ice fog snowstorm, whiteout)	6	7	8	9

Terrain

CIRCLE ONE	Risk Value		SCORE:
Type Terrain	Trafficability		
	Improved	Secondary	Trail / Cross Country
*Mountain	3	4	5
Hills	2	3	4
Flat / Rolling	1	2	3

Rest and Maintenance

CIRCLE ONE	Risk Value		SCORE:
Personnel Rest	Equipment Status		
	Optimum	Adequate	Minimal
<4 hrs. (in 24 hrs.)	3	4	5
6 hrs. (in 24 hrs.)	2	3	4
>8 hrs. (in 24 hrs.)	1	2	3

Numeric Value

1, 2	3, 4	5, 6	7, 8, 9
Low Risk	Medium	**High Risk	***Extreme
7 to 12	13 to 23	24 to 35	36 to 40

Cumulative Score

**** Snow avalanche hazards will often threaten operations; special risk assessment and rescue training required.***
***** High risk operations require coordination, before executing the mission, with the next higher level of command external to the organization making the assessment. If an area receives a 5 or 6 value, the overall rating is high risk.***
****** Extremely high risk operations require the closest scrutiny. If an area receives a 7 or higher value, the overall rating is extreme risk.***

RISK ASSESSMENT WORKSHEET FOR COLD WEATHER OPERATIONS

PART I. IDENTIFY & ASSESS OPERATIONAL AREAS / CONDITIONS THAT ARE INHERENTLY RISKY.

*Write key mission information pertaining to the listed operational elements under **assessment criteria**. Using the Risk Assessment Matrix for Cold Weather Operations, (preceding page), write the number which most accurately defines the status of the operational element in the appropriate **risk value** block. Total the values and assign an **overall initial risk level** to the operation; move on to PART II...*

ELEMENT	*ASSESSMENT CRITERIA*	*RISK VALUE*
Planning		
Mission Control		
Soldier Endurance		
Soldier Selection		
Weather		
Terrain		
Rest & Maintenance		

OVERALL INITIAL RISK LEVEL: _____ ***TOTAL:*** _____

ANNEX G

PART II. ASSESS SPECIFIC HAZARDS

*Assess **specific hazards** associated with risky elements (part I) of this operation. Determine an accurate risk level for each specific hazard by answering these two questions: (1) What is the likelihood of a mishap? (2) What degree of injury or equipment damage is possible. The Universal Risk Assessment Matrix (Annex A) describes the various risk levels in detail.*

PART III. DEVELOP CONTROL MEASURES & RE-ASSESS THE OVERALL RISK LEVEL OF THE OPERATION

*Next, identify **control measures** you will implement to minimize (or eliminate) the risks associated with these hazards. The Planning Considerations for Cold Weather Operations guide (Annex B) describes many of the mission essentials to consider when operating in cold environments. Re-assess the risk level of these hazards. If the control measures are implemented, will the probability and/or severity of potential accidents be reduced? Lower risk levels resulting from the integration of proper control measures into the operation are referred to as **residual risk levels** ... write these in their corresponding blocks.*

The overall risk level for the mission is now determined by the most serious remaining residual risk level. See Appendix E for Approval Authority Guidance for residual risk level. If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested). Extremely high risk operations, where the consequences of a mishap will in all likelihood be catastrophic, require the closest scrutiny. Maximum involvement of key leaders at all pertinent command levels is essential; mission benefits must be critical enough to outweigh the extreme risk factor.

PART IV. *IMPLEMENT CONTROLS*

The procedures for controlling risk must be integrated into plans, orders, standing operating procedures, written and verbal orders, preliminary training, and through other channels that ensure the procedures will be effectively used during the actual operation. Implementation involves the entire chain of leadership as a team, assuring that the full range of approved operational risk controls are in place and ready to go.

PART V. SUPERVISE AND EVALUATE

Supervise and evaluate. The leader uses the same supervision techniques (on-the-scene, spot check, performance indicators) to monitor risk controls that are used to monitor overall operations. Continually assess operational risks and evaluate results, including the effectiveness of risk-management controls.

Information for steps I-V should be recorded on the Risk Management Worksheet.

ANNEX G

RISK MANAGEMENT WORKSHEET

1. Organization and Unit		***2. Page ____ of _____***
3. Mission/Task	***4. Date/Time Group*** ***Begin:*** ***End:***	***5. Date Prepared:***
6. Prepared by: (rank, name, duty position)		
7. Operational phase in which the mission/task will be conducted:		

8. Identified Hazards	***9. Assess the Hazards:*** ***Initial Risks:***				***10. Develop Control Measures for Identified Hazards:*** ***Specific measures taken to reduce the probability and severity of a hazard***	***11. Make Risk Decisions:*** ***Remaining risks:***				***12. How to Implement Controls:*** ***Include SOPs, references, written and verbal orders, etc.***	***13. Supervision and evaluation by:*** ***Continuous leader checks, buddy system, situation reports, etc.***
	L	***M***	***H***	***E***		***L***	***M***	***H***	***E***		

14. Remaining Risk Level After Countermeasures are Implemented: (circle one)
LOW (L) MEDIUM (M) HIGH (H) EXTREMELY HIGH (E)

15. Risk Decision Authority Level: (approval authority signature block)

If initial risk level is medium, high or extremely high, brief risk decision authority at that level on controls and countermeasure used to reduce risks. (Signature indicates that the appropriate risk decision authority was briefed of the initial risk level, control measures taken and appropriate resources requested).

ANNEX G